FIGURE 1

FIGURE 2

FIGURE 3

400

FEATURE EXTRACTOR
410

MODELING MECHANISM
420

DECISION MAKER
430

FIGURE 4

<u>500</u>
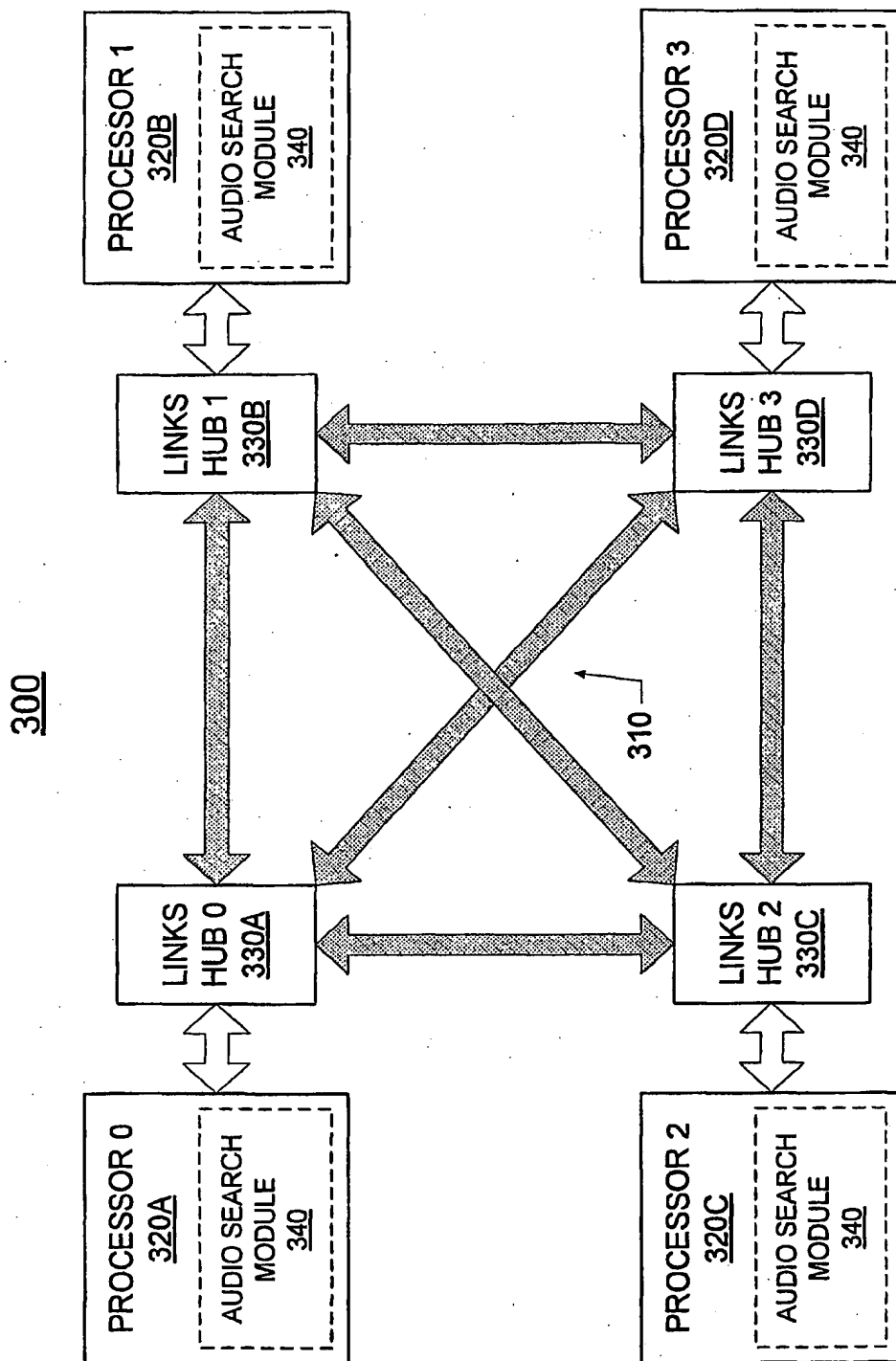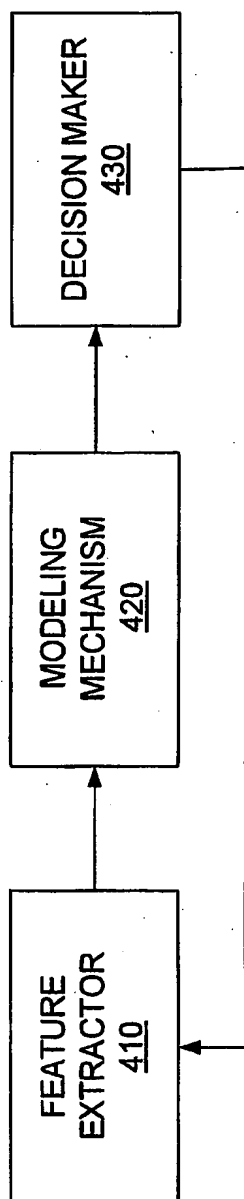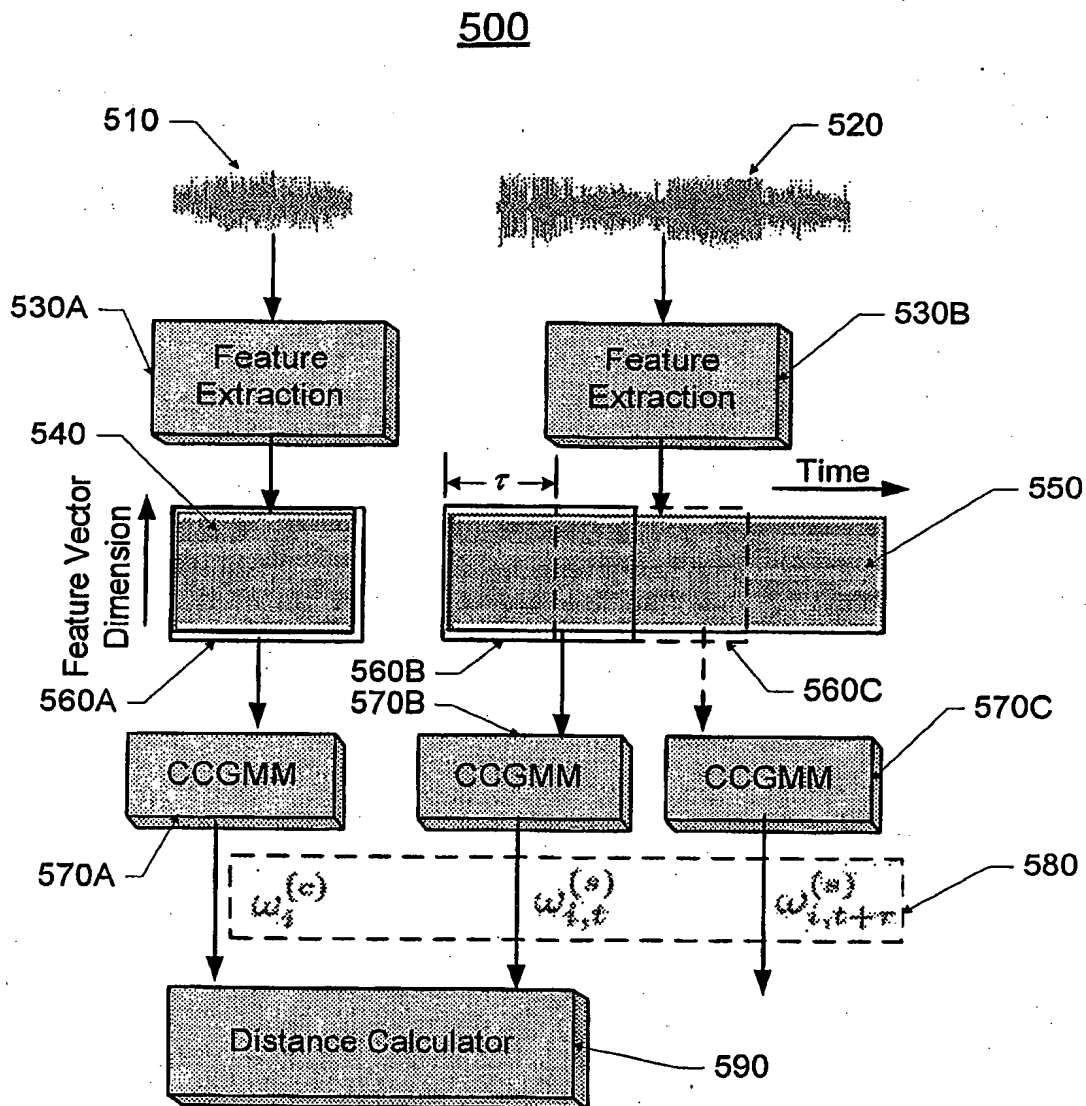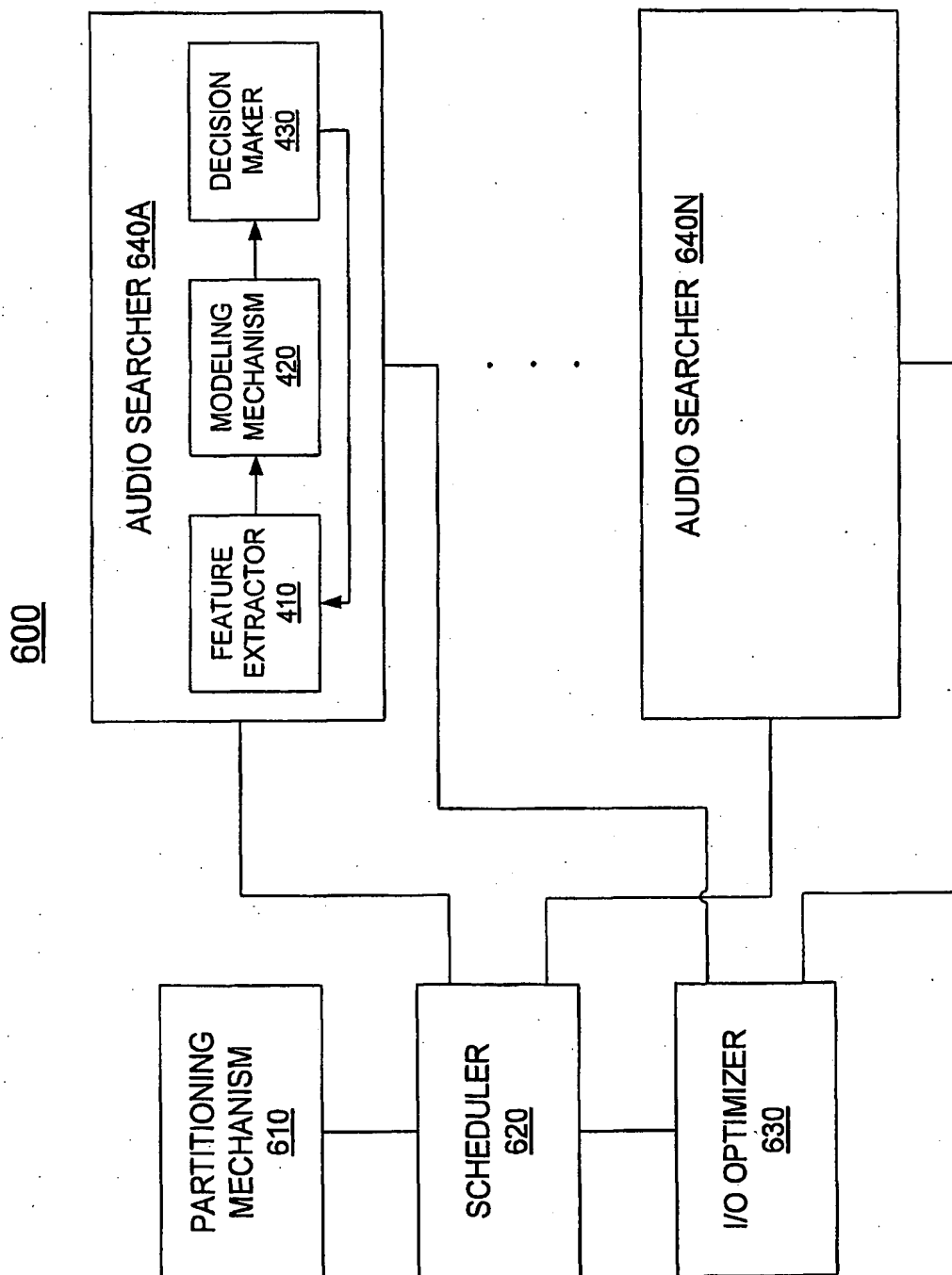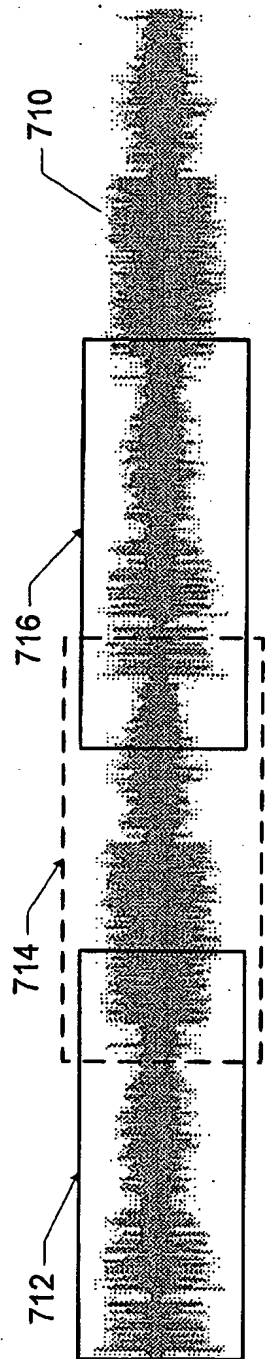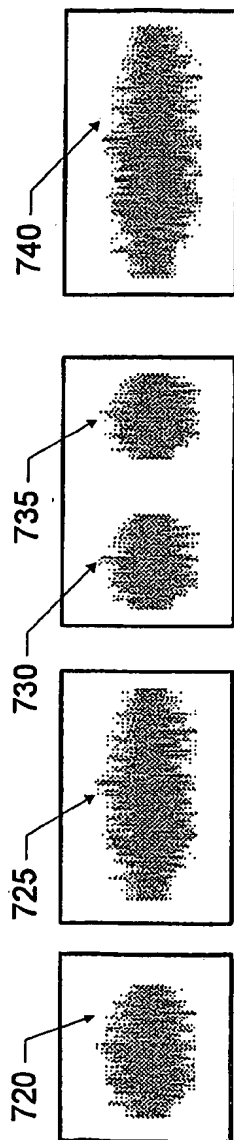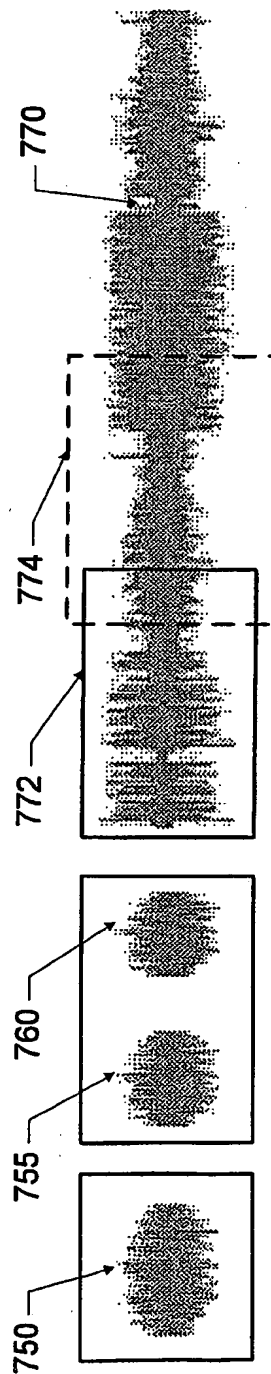

FIGURE 5

FIGURE 6

FIGURE 7A

FIGURE 7B

FIGURE 7C

800

```
802:  Initialization;
804:  Partition a large audio database into NG smaller groups;
806:  Establish a model for target audio clip;
808:  #pragma omp parallel for schedule(dynamic,1),
      num_threads(NumOfThread);
      /* dynamically schedule smaller groups to available processors and
      start parallel processing of the scheduled groups by multiple
      processors */
810:  For groupid = 0 to NG-1
812:  {
814:        Partition current group into NS partially overlapped
           segments, if necessary;
816:        For segmentid = 0 to NS-1
818:        {
820:              Extract a feature vector sequence;
822:              Establish a model for the segment;
824:              Compute distance between the model of each
                 segment and the target audio clip model;
826:              If Distance < threshold #1, Match!
828:              else if Distance > threshold #2,
                       Skip M segments in the same audio stream;
830:              Store results into an local array for the group;
832:        }
834:  }
842:  Output search results of local arrays from each processor ;
```

FIGURE 8